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## BEES FROM PRINCE ALBERT PARK, SASKATCHEWAN

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In Novitates No. 909 (February, 1937) I recorded seven species of bees taken in Prince Albert Park in 1936. The present paper completes the account of the bees taken that year in the Park. The types of the new species will be found in the American Museum. From the nature of the country, a large bee-fauna is not to be expected, but I have no doubt that many species would be added by collecting in late spring and early summer.

**Bombus terricola** Kirby

1.—Hair of face all black. Workers from Lake Ajawaan, Aug. 26 (W. P. Cockerell); Lake Waskesiu, at beginning of portage to Heart Lakes, Aug. 31 (T. D. A. and W. P. Cockerell).

2.—Clypeus with much light hair. Workers from Lake Ajawaan, Aug. 25, and Saskatoon, Sept. 6. The latter, taken by Professor K. King, is not from the Park.

**Bombus vagans** Smith

Lake Ajawaan, Aug. 26 and 27, workers with a large patch of black hair on thorax above, agreeing with *B. consimilis* Cresson, considered to be a synonym of *B. vagans*. With these goes a small male from the north island in the middle of Crean Lake, at flowers of *Senecio*. This has the hind part of mesothorax with black hair, but none on scutellum; the third tergite has the hair entirely black.

A very different variety of the male was taken at Lake Ajawaan, Aug. 25. It has the hair of third tergite mixed yellow and black, and the hair of thoracic dorsum is entirely bright canary yellow, with no trace of black.

I have examined the genitalia of the two different forms of males, and they agree with *B. vagans*. In the variety with entirely yellow hair on dorsum of thorax the genitalia are larger and more robust. This form, having dull white hair on sixth tergite, approaches variety *helenae* Frison, and should perhaps be referred to that variety. It looks like a distinct subspecies, but Frison says that *helenae* occurs in the same nests with typical *vagans*.

**Hylaeus ellipticus** (Kirby)

Lake Ajawaan, Aug. 27, one female at flowers of *Solidago*. This is the form, assumed to be a variety of *H. ellipticus*, which has the clypeus all black, the tubercles cream-color, but upper border of prothorax all black, tegulae without light spots, wings strongly reddened. For a discussion of the variation of *H. ellipticus* see Novitates No. 490, p. 4.

**Halictus provancheri** Dalla Torre

Lake Waskesiu, at beginning of portage to Heart Lakes, Aug. 31, female (T. D. A. and W. P. Cockerell).

**Halictus (Chloralictus) subconnexus** Ellis

Lake Ajawaan, Aug. 27, male, at flowers of *Solidago*. The female of this species was taken by K. King at Saskatoon, Sept. 6.

**Halictus (Chloralictus) subviridatus,** new species

FEMALE.—Length about 5.5 mm., anterior wing 4.7 mm.; head and thorax dark blue-green, the clypeus somewhat yellower; legs black; abdomen very broad, highly polished, pure black; mandibles and antennae black; tegulae very dark brown; wings grayish hyaline; stigma very pale with a strong dark margin, nervures very pale; pubescence scanty, dull whitish, very faintly yellowish on inner side of tarsi. Head large, approximately circular seen from in front, the clypeus not strongly produced, shining, sparsely punctured, with the lower margin black; supraclypeal area shining on disc, front dull; mesothorax dullish, but conspicuously shining mesad of the notauli; scutellum shining, yellower than mesothorax; area of metathorax large, well defined, with strong regular plicae reaching the margin, which is not polished; abdomen with thin inconspicuous hair on apical corners of tergites, and conspicuous white hair at apex. Microscopical characters: front very densely punctured; punctures of mesothorax not so dense, on a minutely sculptured ground; tegulae not punctured; hind spur with about four long oblique spines; abdomen with excessively minute widely scattered punctures.

MALE.—Face narrowed below, with thin white hair; antennae very long, the flagellum reddish clay-colored below except apically; tegulae with a large light red spot; stigma dark brown; nervures brown, much darker than in female; area of metathorax coarsely sculptured; legs entirely dark; abdomen shining black, rather short and robust for a male.

Saskatchewan: Lake Ajawaan, 1936 (Cockerell). The female Aug. 26, the male Aug. 27, at flowers of *Solidago*. The female is the type; I am not sure that the male is conspecific. The female falls close to *H. viridatus* Lovell, which has a dull mesothorax, and much less polished, browner abdomen. It is even nearer to *H. viridatulus* Ckll., from the mountains of Colorado, and seen from in front appears to be that species, but the wings and the less hairy abdomen are distinctive. The striae on lower part of front are oblique, not transverse. Among the species de-

scribed by Mrs. Ellis it falls nearest to *H. zophops*, which is much larger, with a much larger stigma. The male goes in the Sandhouse table to *H. praepes* Ellis, from the mountains of Colorado, but differs by the strongly punctured clypeus, and very distinctly though sparsely punctured scutellum.

**Halictus (Chloralictus) rufulipes,** new species

FEMALE.—Length about 5.8 mm., anterior wing 4 mm.; head and thorax dark bluish green, with scanty whitish hair; legs black, with the knees narrowly red, and the tarsi red, the middle and hind basitarsi somewhat infuscated; abdomen shining black, the margins of the tergites not discolored. Head broad; mandibles red except at base; flagellum chestnut-red beneath; clypeus well punctured, its lower half black; supraclypeal area prominent, with a brassy tint; front dull; mesothorax moderately shining but not polished, very finely punctured, the median groove very strong; scutellum shining, with a median depression; area of metathorax very large, coarsely plicate and wrinkled all over; posterior truncation shining, sharply defined at sides; tegulae very dark in front, with a clear reddish boss behind; wings dusky; stigma very large, dull fulvous, with no dark margin; nervures very pale fulvous; second cubital cell higher than broad, receiving recurrent nervure very near end; third cubital cell much wider on marginal than second; abdomen shining, very minutely punctured, the hair thin and inconspicuous, thinly covering disc of fourth tergite. Microscopic characters: front excessively densely punctured, not striate; mesothorax with well-separated punctures on a tessellate surface; area of metathorax with well-defined plicae at sides, the intervals cross-striate, but in the middle the sculpture is irregular and confused; hind spur with four oblique spines; first tergite practically impunctate.

Saskatchewan: Lake Waskesiu, at the beginning of the portage to Heart Lakes, Aug. 31, 1936 (T. D. A. and W. P. Cockerell). In my manuscript table this runs to *H. viridatus* Lovell, which has a broader, darker thorax, and dark tarsi. In the Sandhouse table it runs to 55, and falls near *H. ruidosensis* Ckll., from which it differs in the metathorax and other characters. Although the abdomen is described as black, in a strong oblique light the basal part of the fourth tergite and the apical part of the third have a distinctly greenish appearance.

**Halictus (Chloralictus) brevibasis,** new species

MALE.—Length about 5.5 mm., anterior wing 4.3 mm.; rather slender, with subclavate abdomen; head and thorax very dark greenish, the cheeks, sides of thorax, and metathorax, black; mandibles black; flagellum very long, obscure brown beneath; head broad, circular seen from in front, the clypeus moderately produced, its marginal region black; face contracted below, it and sides of front covered with white hair; mesothorax dull, finely punctured; scutellum shining on disc, with a median depression; area of metathorax remarkably short, with strong regular plicae on basal half only, the apical margin swollen and shining; posterior truncation sharply bor-

dered, only moderately shining, with a deep median sulcus; tegulae shining black; wings dusky; stigma dusky reddish brown, nervures brown; third cubital cell very broad above; legs black, with white pubescence, abundant on hind tibiae; abdomen highly polished, without bands or spots of hair; there is a large and conspicuous tuft of white hair on each side of venter near apex, on the margin of fifth sternite. The microscope shows that the mesothorax has well-separated punctures on a tessellate surface.

Saskatchewan: Lake Waskesiu, at the beginning of the portage to Heart Lakes, Aug. 31, 1936 (T. D. A. and W. P. Cockerell). This cannot be the male of *H. rufulipes*, on account of the dark tarsi, stigma and nervures. In my table it falls near *H. ruidosensis* Ckll., differing conspicuously in the metathorax and wings. In the Sandhouse table it falls in the vicinity of *H. abundus* Sandhouse, *H. tranquillus* Sandhouse and *H. pudicus* Sandhouse. *H. abundus* is very different by the large, coarsely sculptured area of metathorax. The dark tarsi and other characters separate our species from *H. tranquillus* and *H. pudicus*. In Robertson's table it falls near *H. obscurus* Rob., but the wings are quite different.